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REMARKS

Claims 1-16 are all of the claims presently pending in the application. Applicant has amended claims 1, 7, and 11-14 to define the claimed invention more particularly.

Applicant believes that entry of the claim amendments is proper since no new issues are being presented to the Examiner, which would require further consideration and/or search.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1, 2, 3, and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yamamoto (U.S. Patent No. 6,064,079). Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto further in view of Fukuda (JP 2003-115610). Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto in view of Kaneyama (U.S. Publication No. 2002/0014632). Claim 11-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto further in view of Fukuda. Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto further in view of Nomura (U.S. Publication No. 2003/0147440). Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto further in view of Ishikawa (U.S. Patent No. 4,987,096).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The invention of claim 1 (and similarly claims 7 and 11), for example, is directed to a

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group III-nitride-based compound semiconductor device, that includes a first p-layer and a second p-layer, the first p-layer and the second p-layer including an acceptor impurity, and an intermediate layer provided between the first p-layer and the second p-layer, the intermediate layer contacting a surface of the first p-layer and a surface of the second p-layer. The intermediate layer contacts an entirety of the surface of the second p-layer (e.g., see Application (Publication No. 2006/0097283A1) at Figure and paragraphs [0033] and [0048]) and comprises a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side (e.g., see Application (Publication No. 2006/0097283A1) at paragraph [0033]).

The intermediate layer has a low-conductivity due to doping of a donor impurity and, therefore, can offer an improved electrostatic withstand voltage while suppressing an increase in driving voltage. This effect is based on that the intermediate layer contacts the entire surface of the p-contact layer (or second p-layer) such that an applied voltage does not concentrate on a part of a p-electrode side, but extends widely across the p-electrode side (e.g., see Application (Publication No. 2006/0097283A1) at paragraph [0033]).

II. THE PRIOR ART REFERENCES

A. The Yamamoto Reference

The Examiner alleges that Yamamoto teaches the claimed invention of claims 1-3 and 6. Applicant submits, however, that Yamamoto does not teach or suggest each feature of the claimed invention.

That is, Yamamoto does not teach or suggest, “*wherein the intermediate layer contacts an entirety of the surface of the second p-layer and comprises a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side*”, as recited in

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exemplary claim 1, and similarly recited in exemplary claims 7 and 11.

Concerning Yamamoto, the Examiner alleges, "Said device comprises a first p-layer (15, 16) and a second p-layer (16, 18) to each of which an acceptor impurity is added (column 5 lines 15-25). An intermediate layer (17, 34) is provided between and in contact with the first p layer and the second p- layer (column 5 lines 25-40)." (See Office Action dated December 13, 2007 at page 2).

However, the intermediate layer (17, 34) of Yamamoto does not contact the whole surface of the second p-layer (16, 18) or does not have a conductivity such that it prevents an applied voltage from concentrating on a part of a p-electrode side.

First, provided that either one of a current blocking layer (17) and a modulation layer (34) means the intermediate layer, the current blocking layer (17) or the modulation layer (34) does not meet the intermediate layer of the claimed invention since neither contacts the whole surface of the second p-layer (16, 18) (See FIGS.1A and 2A of Yamamoto).

Next, provided that the integral of the current blocking layer (17) and the modulation layer (34) means the intermediate layer, the integral intermediate layer does not meet the intermediate layer of the claimed invention since the current blocking layer (17) does not allow current flow therethrough (See attached Figure – Exhibit A located at <http://www.ecse.rpi.edu/~schubert/Light-Emitting-Diodes-dot-org/chap08/chap08.htm>) so that an applied voltage does concentrate on a part of a p-electrode side, i.e., a vertical part passing through the conductive modulation layer (34).

As a result, since the intermediate layer (17, 34) of Yamamoto does not meet the intermediate layer of the claimed invention, the claimed invention is not anticipated by or obvious over Yamamoto.

Moreover, Applicant submits, *In re Schreiber*, which is cited by the Examiner, does

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not observe “the limitation must distinguish from the prior art in terms of structure rather than function”. This precedent only states that, in relation to a functional limitation, the Patent Office possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. For example, *In re Schreiber* reads:

“As our predecessor court stated in *Swinehart*, 439 F.2d at 213, 169 USPQ at 228: where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. See also *In re Hallman*, 655 F.2d 212, 215, 210 USPQ 609, 611 (CCPA 1981); *In re Ludtke*, 441 F.2d 660, 663-64, 169 USPQ 563, 565-67 (CCPA 1971).”.

Also, MPEP 2173.05 (g) mentions, “Whether or not the functional limitation complies with 35 U.S.C. 112, second paragraph, is a different issue from whether the limitation is properly supported under 35 U.S.C. 112, first paragraph, or is distinguished over the prior art.”

Therefore, Applicant submits that there are elements of the claimed invention that are not taught or suggest by Yamamoto. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection.

B. The Secondary References

The Examiner alleges that Fukuda would have been combined with Yamamoto to teach the claimed invention of claims 4, 5, and 11-14. Furthermore, the Examiner alleges that Kaneyama would have been combined with Yamamoto to teach the claimed invention of claims 7-10. Furthermore, the Examiner alleges that Yamamoto would have been combined

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with Nomura to teach the claimed invention of claim 15. Applicant submits, however, that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, Applicant submits that claims 4, 5, and 7-10 are allowable at least for similar reasons as those set forth above in section A, with respect to claims 1-3 and 6.

Therefore, Applicant submits that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submit that claims 1-16, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. Applicant respectfully requests the Examiner to pass the above application to issue at the earliest possible time.


Should the Examiner find the application to be other than in condition for allowance, Applicant requests the Examiner to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

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The undersigned authorizes the Commissioner to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

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Respectfully Submitted,



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FACSIMILE TRANSMISSION

I hereby certify that I am filing this paper via facsimile, to Group Art Unit 2818, at (571) 273-8300, on February 13, 2008.

Date: Feb 13, 2008

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